Séminaire "Recherches en Phonétique et Phonologie". LPP (CNRS/Sorbonne Nouvelle)
Vendredi 26 juin 2009-06-25

Pharyngeals vs. Emphatics in Iraqi Arabic: Acoustic and Articulatory Evidence

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Acoustic measurements of previous studies showed that vowels in the vicinity of emphatics in Iraqi Arabic are characterised by lowering of F2 and slight raising of F1; an indicative that the type of the co-articulation concerned is pharyngealisation. (Hassan 2005, Hassan & Esling 2007). This acoustic evidence was supported by an articulatory (laryngoscopic) evidence which showed a higher degree of stricture in the pharyngeal articulator throughout all syllables in words containing an emphatic, at points where F2 and F1 narrow acoustically. This was shown as a result of the three classic components of laryngeal constriction (aryepiglottic sphinctering, tongue retraction, and larynx raising).

Pharyngeal consonants, on the other hand, showed more narrowing of F2 & F1 but considerably less ability to spread over the other syllables of the word as the emphatics; their influence hardly exceeds the preceding and /or the following vowels. (Hassan & Esling Forthcoming). From an articulatory point of view, the laryngoscopic data showed very interesting laryngeal mechanisms such as; the generation of aryepiglottic trilling vibration in realisation of the geminate /ħ/; one of the most convincing pieces of evidence to record voiceless pharyngeal trilling as a speech sound. (Edmondson, et al 2007). Also, Iraqi Arabic

/ʕ/was shown in different phonetic contexts as having different realizations; a pharyngeal tap when used in intervocalic position, or as a full epiglottal stop when used as an intervocalic geminate. These findings strongly support the findings of (Esling et al, 2005) in Nuuchahnulth that pharyngeals / ħ / and /ʕ:/ are not only lingually retracted but are primarily a function of an aryepiglottic laryngeal constriction mechanism.

A more elaborated study (Esling & Hassan, Forthcoming) studies Iraqi Arabic voiced and voiceless pharyngeals in these phonetic contests, concentrating on the laryngeal articulator which consists of the glottal, pharyngeal and epiglottal mechanisms.

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